

Sims (J. Marion)

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FOOD.

OPEN LETTER TO J. MARION SIMS, M.D., LL.D. *by*

(From Gaillard's Medical Journal, February, 1881.) *Ephraim Cutter*

BOSTON, MASS.,

December, 1880.

My Dear Doctor—One of your peers has said that food is an agent of tremendous power. In support of this opinion, I have only to refer to the fact that all organized beings in the animal and vegetable kingdoms exist by means of food. Not only the existence but the character of fauna and flora depends on the quality of food. Anything that sustains, nourishes and augments an organism is food. On this ground air is food. Dr. Tanner is popularly said to have lived on nothing but water for forty days. But without air he could not have lived four minutes. Hence we must conclude that an agent that acts twenty times a minute and 28,800 times a day and more in the life epoch of every civilized individual must be a cogent agent. One would think that man ought by this time to know all about it, but it is curious that intelligent human beings, and even educated physicians, take, in their estimates of food, only partial views, and govern their actions by these partial views. That is, food is judged more on æsthetic grounds than on any other. We find people asking, "Does food look nicely, smell goodly, taste goodly, affect the sense of hearing nicely, and touch rightly?" I have no quarrel with this mode of doing things; but as man is a recording animal, he has, in the passage of ages, accumulated histories that throw light on the subject of food from other stand-points of view. All I ask is to have such histories respected by man in the selection of food. I think the chemist, the physicist, the physiologist, the pathologist, and the therapist, should be consulted as well as the æsthetics of our senses.

The chemist can tell what elements are in food and what are in our bodies. The physicist can tell us how it happens that we are merely the exponents of the power in

the sun, or how we become examples of the actual energy kinetic of the sun's potential kinetic energy stored up in the food we eat. The physiologist can tell us about the wonderful processes of digestion, and what food is assimilated in the best manner. The pathologist can tell us how food produces disease, and the nature of the disease. The therapist can tell us how food is a cure for disease. I am well aware that people generally overlook the dicta of the scientific men, but this is no good reason why their opinion should be crowded out of sight by the things that appeal to the beautiful in the sense of sight, taste, smell, touch and hearing.

But, my dear Doctor, you ask me to tell you something about food in a particular manner. I think you will see that the subject broadens out so much that a volume would be necessary to contain what might be written. I think, therefore, that perhaps if I call your attention to the aspects of food as a cause and cure of disease, I can more appropriately meet your wishes. Should you desire to read what I think of food as an anæsthetic, chemic, kinetic, physiologic, pathologic and therapeutic, you will find it in the *American Journal of the Dental Sciences*, January and February, 1880, Baltimore, Md. Before proceeding farther, I desire to acknowledge my indebtedness to Dr. James H. Salisbury, of Cleveland, Ohio, for his original and fruitful investigations in relation to food. He is my master.

FOOD IN HEALTH.

Prof. L. W. Mason, now at Tokio, engaged in introducing Western music into the Empire of Japan, said once to me, "If people would take as much pains with their own feeding as they do with their animals, there would be much less unhealthy feeding." Dr. Salisbury says that if we can find out what is the natural food of an animal, we can have healthy feeding. Give the

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animals a chance and they will only partake of their natural food and be healthy, other things being equal. It is very interesting to watch the process of eating in animals we call low in the scale of life. Take the Rotifers, for example. They vibrate their cilia with such force as to make a powerful current of water to flow towards them. Objects swimming in the water are thus drawn towards the mouth of the Rotifer. But the Rotifer does not take in everything that can get into its mouth, like a conduit, but every once in a while one sees the undesired object suddenly thrown out of the way on exactly the same principle that man rejects indigestible objects. Even the root-footed animals—rhizopods—that have only a body and legs, select their food; yet they don't seem to have special organs of sense. But they will take only their natural food, and if they don't get it, they don't thrive, as a general rule. The same is true as to plants, so that the possession of a high order of intellect, or even of any intellect at all, is not necessary to healthy feeding. We say that the plant or the animal instinctively feeds on its appropriate food, when it can be obtained. A healthy, whole body is the result as a general rule. I think, however, that the subject of instinct in relation to food needs a special treatment; but it is foreign to our subject here only to aver that if man would follow his instincts more in food, perhaps it would be better for him. Among savage races we find specimens of health, so much so that some people seem to think that they have no diseases at all, and even have perfectly normal parturition. But while it is true that savage races bear more severe strains on their systems than the civilized, still the testimony of travellers and others combine to show that savages are not exempt from diseases, and suffer accidents of parturition. The same is true of animals. But why should we regard it as forcing things to infer that the Creator made His creatures adapted to the different kinds of food He intended they should have. Do we not see in the

bovines a wonderful digestive system exactly adapted to the digestion of vegetable food? Is not the common fowl provided with a digestive system which will easily appropriate the grains that would be almost indigestible to man? And so on. Dairymen, hostlers, and ladies know something about these facts, and successfully practice on them when they feed kine, horses and birds. But I never heard of any of the parties named feeding their charges on food simply because they thought it looked, tasted and smelt pleasantly to the animals named. To be sure, there is no doubt but that the animals named have their senses gratified by their food, for they evidence this in their acts. But the main aim of the keepers is health. Why, I ask, should not this be the end in the feeding of man?

But what is a healthy feeding for man? Upon this subject there are many opinions. Some maintain them with acrimony. Liebig, the great chemist, gave the world ideas on this subject; but I don't think any one eats on the plan of nitrogenous or non-nitrogenous. It seems as if the question turned on animal or vegetable food. There have been and are people that eschew animal food altogether. Some make it a matter of their religion to eat and not to eat certain foods. The Bible gives good authority for this way of estimating food. But after looking over the subject with some care, I follow the dicta of my master, and assent that two-thirds animal and one-third vegetable food is the healthy proportion of food for man, when he has arrived at adult life. I suppose not even the most ardent vegetarian would insist that milk from the mother's breast was not the natural aliment of a new-born babe. Our rule applies to the period subsequent to lactation. There are said to be examples of adults living on animal food. An informant tells me that in the recesses of Central America there have been individuals who lived to extreme old age—even to 150 years—on animal food exclusively. They had not their savage lives influenced by civilization. Sir Francis Head, in 1825,

explored the pampas of South America. He was attracted by the diet of the herdmen—beef and water. Although he had his French *cuisine* with him, still he adopted the methods of the herdmen, and said he could not better express himself, in speaking of the results, than by saying he had a feeling of indescribable lightness, that he felt no exertion could kill him.

Why animal food two-thirds, vegetable food one-third, is the natural proportion, is as follows: 1. In the human adult in health there are thirty-two teeth. Twenty of them are for animal food, and the balance for vegetables, as indicated by their structure. Experience has proved it.

There are other reasons, but room forbids more in this division, save to remark in passing that savages and animals have a great advantage over civilized races in the fact that society does not make them use food which has been changed in its chemical proportions and characters, so as to conform to the so-called standards of æsthetics. For example, when the savage eats a grain of wheat, he gets all the gluten cells that God intended man should get when he eat wheat. The civilized man eats flour made from wheat—to be white in color there is the withdrawal of three-fourths of the gluten cells. So because society insists that bread, to be good, must be white, the civilized man loses three-fourths of the nerve food that the savage gets when he eats wheat. I regard this as an evil. But, supported as it is by a gigantic monetary and industrial interest, I think it will be a long time before it is abated. A history of the resistance to the efforts to correct this evil would be a convincing argument for those who believe in the depravity of mankind.

Starting, then, with this standard of two-thirds animal food and one-third vegetable, by bulk, we will now pass to the consideration briefly of some of the practical applications of our subject. For the fuller consideration, I respectfully refer your attention to a proposed work on food as a cause and cure of disease, by Dr. Salisbury

and myself, ready for forthcoming when the times seem to demand it.

FOOD AS A CAUSE AND CURE OF CATARRH.

In 1858 I was much interested in this trite subject of catarrh. To aid me in my work I devised a laryngoscope, which was made by Mr. Alvan Clarke & Sons, the celebrated telescope makers. I mention this to show the degree of my interest. But it was not long before I found that no matter how good my instruments were, I could not cure catarrh by topical remedies, without I resorted to the powerful agency of food. Nasal catarrh is not a very good term, I think. It was coined at a time when laryngology was unknown. I am happy to say that at the present time efforts are being made to have a better nomenclature. But the conditions I mean were those that were caused by inflammations, ulcers, vices of secretion, adenoid hypertrophy, and an asthenic condition of the inside of the nose. I believe they are all diseases of weakness caused by mal-nutrition from faulty respiratory and stomachic food. Dr. Elsberg says that our topical applications to the parts affected are not directly curative of themselves. They, to use a vulgar phrase, kick up a row with the parts, and the hope of cure resides in the fact that nature, when the row is over, settles down into a healthy or peaceful condition. But the trouble I have found with these cases is, that the row I kicked up with my applications did not settle down into health. Sometimes it seemed to me like kicking a sick dog or a dead lion; there was not life enough present to respond to the stimulus. But when I fed my patients on the Salisbury plan, and had infused new life into them, then the stimulus acted like magic in the cure. Sometimes, with no topical applications more than half the cure could be effected. I remember a lady of middle age, who had a bad case of pharyngitis sicca. Her family attendant said it could not be cured. It was very interesting to see the moisture return on the polished membranes of the throat simply by food. Afterwards there were some spots of ad-

enoid hypertrophy that yielded to topical applications of the persulphate of iron and glycerine equal parts. The fact was she had been living on starch and sugar mainly. She did not get force enough from her food to run the concern, so to speak. The moment her nerve centres were well fed by an abundant supply of nutritious food the moisture returned to the mucous membrane? The throat is a part of the body that never can have a rest, like a broken limb, for example. Hence it is more liable to give out.

I do not wish to be understood as saying that I trace all throat affections to the want of the normal diet, but I do mean to say that I believe a great part of the present reputation of catarrh as incurable would be removed if man got his normal food.

FOOD A CAUSE AND CURE OF AGALAXIA
OR WANT OF MILK.

In the *American Journal of Obstetrics*, April, 1878, I was permitted to present a paper on this aspect of the food question. I took there strongly the ground that nursing mothers could, other things being equal, obtain milk enough for lactation, if they would feed themselves as dairymen feed their cattle—in order to obtain a full dairy product. Since that time I have been confirmed in these views; and in the *Virginia Medical Monthly*, August, 1880, I reiterated my assertion. To show the strength of my position, I published the following case: A daughter of the Prof. Mason I have alluded to married and went to the State of Maine to live. She was about 24 years old, and weighed 96 pounds. In due time she was delivered of twins. As they were sons, the maternal grandfather was very anxious that they should derive their nourishment from their mother. This had been pronounced impossible by the old ladies and others of the neighborhood, who advised her not to attempt such a thing, as she would have to wean them in a short time, from the want of sufficient milk. It is confessed the ladies had good grounds for their opinions. The grandfather, having himself been a pretubercular case of con-

sumption, cured by the Salisbury plan knew something about diet, and applied to me to know if she could not suckle the twins. I replied yes. "Well," said he, "make out a list of foods, and I will see that it is faithfully carried out."

The appended list was sent to her, in substance. At the age of six months the twins had had the full benefit of the plans. They had derived all their nourishment from their mother. One twin weighed seventeen pounds; the other weighed eighteen pounds, and the mother had gained ten pounds.

In another case, where a woman had her ninth child, and she went during and after pregnancy upon the diet, she had milk enough to suckle the child until it was 22 months old. Indeed, I have had no case, where the Salisbury plan was followed, but that had an abundance of the secretion of the mammary gland. Dr. Salisbury himself has finely worked up this subject, and in the proposed work on food it will be fully developed.

To my mind one of the greatest offences against a man is to deprive him of the normal supply of nourishment during infancy. It gives a bad start. He is shorn of his natural rights. I think it is the duty of all physicians to do what they can to have the rising generation enjoy their due supply of normal food. If there is a healthy, well-fed mother, I see no reason why they should cheat their offspring of their natural rights. And if the mother lives on the normal food, the act of giving nourishment by the breast is one of delight. The present abundance of nursing bottles and infants' foods in the drug stores is evidence of degeneration. If my experience is borne out in the history of other physicians, they are unnecessary evils. But in passing I may remark that my attention has been called to two cases where infants were given up to die after having used the common artificial foods, but were restored to health by the use of the Arlington, Mass., wheat in one case, and the flour of the entire wheat—Franklin Mills, Lockport, N.

Y.—in the other; thus proving in these cases that the retention of the normal amount of the gluten cells in the flour gave nourishment to the infants where before it was denied. Shall our children be sacrificed to the moloch of æsthetics that requires flour to be white in order to be fit for food?

In the following list I have reserved my rights for the reason that I have found it necessary to protect the lists from alteration by others:

DIET LIST FOR LACTATION,

ON THE SALISBURY PLAN.

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BY EPHRAIM CUTTER, M.D., BOSTON, MASS.

Member Gynæcological Society of Boston, Victoria Institute, London, Etc.

Aliments include air and drinks. Food should be pure, seasonable, healthy, properly cooked, regularly taken and liberally eaten. Besides the æsthetic view of food there are the chemical—kinetic—physiological, pathological, and therapeutical. Common sense estimates include all these. As the object of lactation is a plentiful supply of milk that answers the above standards, the nursing mother should not allow love of the beautiful alone to select her food. While food should not offend the senses, it should contain all the elements found in the infant's body, be rich in blood, nerve, bone, muscle, vascular, glandular, respiratory elements. In other words, as we feed kine for milk, birds for health, and horses for work, by giving them their natural food, so we should feed nursing women on their natural food, to wit, two-thirds animal and one-third vegetable (Salisbury). Besides, it would be better to live on the diet during gestation.

LIST OF FOODS.

ANIMAL FOOD.

<i>Milk,</i>	Pigeon,
<i>Eggs,</i>	<i>Squab,</i>
<i>Cream,</i>	Fish of all kinds,
Cheese,	aquatic or marine

<i>Beef Steak,</i>	<i>Salmon,</i>
<i>Sirloin Steak,</i>	<i>Eels,</i>
Porterhouse Steak,	Haddock,
<i>Roast beef,</i>	Soup,
Corned beef,	Perch,
<i>Beef tongue,</i>	Halibut,
<i>Tripe,</i>	Sword fish.
<i>Ox tail,</i>	Cusk,
Calves feet & heads	<i>Clams,</i>
Pork, fresh & salt	<i>Clam water,</i>
<i>Pig's feet</i> and heads,	Shell fish.
Sausages,	<i>Oysters,</i>
<i>Chicken,</i>	Scollops,
Geese,	Shrimps.

VEGETABLE FOOD.

<i>Wheat,</i> whole, crack-	Celery,
ed, crushed, and	Onions,
baked like oatmeal.	Spinach,
Arlington wheat meal,	Lettuce,
<i>Franklin mills entire</i>	Dandelion,
<i>flour,</i>	Parsley,
<i>Cold blast,</i>	Radish,
Carr's Graham flour,	Cranberry,
Oats,	Turnip,
Rye,	Squash,
Maize,	Carrot,
Buckwheat,	Pickles,
Peas,	Fruits,
Cabbage,	Apples,
Tomatoes,	Irish moss.

NOTE.—The patient is not expected to eat everything on the list in order, but to make selections according to will; but the articles in italics are preferred.

5 Somerset St., Boston, Mass. }
Aug. 2nd, 1880.

FOOD AS A MEDICINE IN UTERINE FIBROIDS.

In the JOURNAL (see above) Oct., 1877, I put myself on record as having cured fibroids by diet. I desire to say to you, Dr. Sims, that these experiences have been repeated since—that in Sept., 1880, I read before the Gynæcological Society of Boston a list of thirty-nine (39) cases that Dr. Salisbury, with whom the practice had originated, had cured by the same means. In the proposed work we expect to swell the list to over three hundred cases.

You know very well that I have not been

timid in my attacks on uterine fibroids surgically; but as time goes on, I predict the adoption of the Salisbury plans—that is, if our experience is repeated in that of others. The difficulties in the way are great, and the greatest difficulty is in the proper carrying out of the diet. I know gentlemen that have tried the plans and have failed. I have myself failed because I could not control the diet: but in those cases that have been faithful to the diet most have been rewarded by a splendid success. I think, in order to convince such minds as yours, that the best plan would be to have patients treated in a sanitarium, in some central locality, where the patients could not get off the diet, and under the supervision of an attendant who is skilled in the Salisbury plans; where the diagnosis could be verified at the start by experts like yourself, and where the patient could be watched during the treatment.

The *rationale* of the Salisbury plans is, that uterine fibroids are diseases of nutrition—an hypertrophy of the fibrous and muscular tissues due to impoverished food, and an excess of carbo-hydrates. When you reflect that no agency comes so intimately, so continuously, and so naturally as food, and that there is a considerable amount of force expended in simply replacing tissues, it is easy to see that if the repair forces of the system are not kept up to their normal strength, that the tissue may run riot, just as when governments have all their energies occupied.

In quelling a rebellion, another one may break out in another quarter; but, explain as you please, the great fact remains that quite a large number of cases have been cured by this process of food treatment—See as above, *American Journal of Obstetrics*, for diet list.

FOOD AS A CAUSE AND CURE OF OVARIAN TUMORS.

In 1863 Dr. Salisbury had a paper detailing his experiences in relation to this division of our subject. It is kindred to

the last topic, and will receive attention in the work alluded to. It is a new announcement that cures have been effected by this method. But it is none the less true.

FOOD AS A CAUSE AND CURE OF DIABETES.

In the *Virginia Medical Monthly*, Nov., 1880, is Dr. Salisbury's paper on this subject, extracted from a paper on the cause and the treatment of diabetes mellitus, ready for the press in 1864. He says: "In this disease the lobules of the liver, or that portion of the gland which is directly connected with the blood vessels, and which organizes glycogenic matter or animal sugar, is the part that is directly involved. This portion of the liver is too active and makes more sugar than is required. This excess has to be eliminated, and the kidneys have this work to do. Soon they become overactive, and little by little become involved indirectly in the disease. To effect a cure we must cut off all food, as far as possible, that goes to make animal sugar. This includes vegetable food, fruits, animal fats, tendon and connective or glue tissue, and cartilage; also excess in drinks. Medicines alone will not cure the disease. They are only aids in restoring a healthy state after the cause of the unhealthy alimentation has been removed. None but careless feeders have this disease, unless, in rare instances, it may be imperfectly developed by local injuries. Diseases in organs, which arise from defective or unhealthy alimentation, are the results of confirmed habits in eating too exclusively and continuously food which, in the way of proportion in which it is taken, cannot be well digested; consequently it is unfitted for assimilation. The chemical and vital changes of fermentation, decay, and cryptogamic development set in, resulting in the production of agents debilitating and poisoning to the various vital organs which they reach by being more or less taken up by the gland cells of the digestive apparatus. These diseases are pathological habits in the organ or organs affected, and have been brought on by being continuously compelled to do and to be

exposed to labors unfitted for them to perform or endure, without becoming more or less over-taxed, enervated, deranged, paralyzed and changed in function, and eventually in structure."

The drinks, food, bathing, exercise, clothing, and treatment are fully set forth in the extract alluded to. I am happy to say that cures are effected by this plan.

FOOD, &C., IN CONSUMPTION.

The Salisbury plans in consumption look more like introducing an era of positive medicine than anything we have come across in the history of medicine. When a man comes forward who shows that he has caused a disease in 104 cases by feeding yeast in the food, and verified it by *post mortem* examinations in the individual cases (104); moreover, shows how to detect the pretubercular state and the disease in the blood; moreover, presents cases of cure for inspection; moreover, when another man appears, who verifies the treatment and cure of the same disease by the same methods, then I think, if the men are pronounced not insane and worthy of credit, it would seem as if there was something certain in medicine. We are such men, and consumption is such a disease. In 1858 Dr. Salisbury had a work ready for the press, in which he relates the account of his experiment with over two thousand swine. As to food, he fed 1026 swine on food filled with yeast. Soon diarrhoea came on. He found the yeast in the blood, and, to be brief, in the course of eight weeks 246 of the swine died, and of these 104 were examined with the result stated. Moreover, he hired men by the day to eat their food filled with yeast, or food that is the food of the yeast plant. Diarrhoea came on in all, and the presence of the yeast was found in their blood. Again, he has treated over 1,000 cases in the last 25 years, and, to put it mildly, he has claimed to cure over two-thirds of the cases. In the forthcoming volume of the Transactions of the American Medical Association for 1880, I publish seventy cases of my own observation, in which the proportion of

one-third cures is maintained by the Salisbury plans.

Under the proper conditions, Dr. Salisbury has cured two-thirds of his cases. But in my labor the great difficulty has been to induce them to enter into the work as they should, and ignore the cravings of diseased appetites. The road is long but safe. Variety is not wanted, but the best and most adaptable food for bringing about and maintaining the most perfect health.

Hence the need of a sanitarium, to enforce the diet rigidly, and meet the exigencies of each case, as they come up. In his sanitarium, Dr. S., by personal care, enforcement and example, has been able to secure his wonderful success. My proportion of one-third was got under unfavorable circumstances.

In the Washingtonian homes the cures of drunkards are effected by the sympathy and encouragement of reclaimed inebriates. I have known of a most desperate case thus saved lately, so in the present disease there is a terrible appetite to conquer, and the patient needs all the aid that can be got in every direction.

In the Virginia *Medical Monthly* is the full text of the treatment of consumption by the Salisbury plans. It is an extract from the full work which, with my corroboration, is yet to appear, when demanded. Twenty-five years ago Dr. Salisbury made bread from the yeast in the diarrhoeal dejections of third state consumptives. I send you some bread I had made after this process in 1878.

Although medicines play an important part in the cure of consumptives, still the key-note of the Salisbury plans is to remove the yeast from the blood and build up the system by putting the great glands in good order, so that they can run the system properly. The full development of this topic would fill a large volume. Indeed it fills a volume. I hesitate not to repeat for myself that I have found nothing like this in the history of medicine.

Consumption is a lung disease, found in the blood a year before organic lung dis-

ease. Tubercle is an accident, a secondary formation, caused by embolism and so forth.

FOOD, &C., IN DISEASES DEPENDING ON FATTY DEGENERATION.

Atheroma—broken heart—cerebral hæmorrhages, Bright's disease of the kidneys, in some of its forms, come under this head.

The *rationale* of their production, in the light of the food question, is clear. It is only necessary to have starch and sugar in excess so to have conditions favorable to the development of the different forms of fatty degeneration; that tissues are changed into fat and thereby weakened in strength; they are not able to stand the normal vascular pressure, and thence rupture like a worn-out hose pipe, so that some of the pathological results of this lesion are explained on the ground of mechanical weakness. Of course it does not explain all the symptoms and results, but it is a most important pathological condition. It is relieved by excluding starch and sugar from the diet. As the food goes to the most intimate and profound structures of the body, and as food, excluding the carbohydrates, does not tend to the increased production of fat, hence it follows that a confinement to such food arrests the process of fatty degeneration, and often cures it by the deposition of normal tissue in its place.

It is strange that advantage is not more taken of the fact that the whole body can probably be all remade over in the course of seven months, at a low estimate. We are well aware that fatty degeneration is a normal process of old age in the animal. Also from some microscopical examinations made of the fading maple leaves, in the fall, and finding that the parenchyma of the leaf undergoes a form of change exactly like fatty degeneration, accompanied by a peripheral deposit in the ducts of the stem that blocks up the canals, cuts off the sap, and thus possibly causes the degeneration—still we have the disease of fatty degeneration long before old age, and our expe-

rience teaches us to expect, by changing the character of the food from the carbohydrates in excess to animal food of a lean character, that many persons would recover who are now lost.

FOOD A CAUSE AND CURE OF DISEASES OF THE NERVOUS SYSTEM.

It is easy to see that if the nerve centres do not receive their proper food, the nervous system is liable to suffer. For this reason we deprecate the withdrawal of the gluten cells from our flour as a direct damage to the nervous system. The chemists tell us that there is a withdrawal of 75 per cent. of the phosphates from the milling of flour. The morphological examination of flour and wheat compared confirms this statement. Now, when we consider that flour is the pre-eminent food of the present time, we think we are not mistaken if we feel like referring the general prevalence of neurasthenia and other nerve disorders, as compared to former times, when the use of flour was not so common, other things being equal, to the use of this impoverished food. We have been told that the treatment of imbeciles and idiots is now based on this idea. As we look at it, we cannot expect to have good nervous systems, unless the proper nerve food is present in the aliment. Of course other causes co-operate, but as bricks cannot be made without straw, so cannot the nervous system be organized normally out of elements that are deprived of their phosphates and other nerve elements.

This subject is capable of great expansion. We might show how we believe that the prevalence of the neurotic diseases of women abound because of the exclusion of the phosphates from the food.

The fact is, nerve centres must be fed. Mere stuffing is not feeding; but true feeding consists in giving the human body aliment that contains all the elements found in the human body in proper proportions, and in assimilable forms. Then the nerve force is supplied that runs, so to speak, the body; and all the various parts get their normal amount of legitimate nourishment.

I have thought indigestion was sometimes so difficult in some cases because the independent ganglionic nerve centres of the abdomen did not get fed. On this principle has it seemed to me the cure of constipation is based. Some have attributed it to the mechanical coarseness of the food. But as the cures have been just as constant in instances where the flour has been very fine but included the gluten cells, I have thought the constipation was cured simply by giving the ganglia their proper food. From this we have also inferred that the best way to treat nerve diseases was to feed them well, and then, if they did not respond, to rouse them up with neurotic medicines. When a horse, for example, needs hay, grain, and feed, it is a poor policy to use whip and spur first. Dr. Salisbury teaches us that the red blood corpuscles are covered by what he calls neurine, or nerve food. When there is an absence of this neurine the globules become sticky and adhesive. It is wonderful how readily sometimes this coating is renewed by proper food. Again, I suppose that none will deny that muscles act under the power of nerve food. For cut the nerve and the muscle to which it is distributed is useless. So when I think of the heart propelling, according to Rufus King Browne, the blood through capillaries that would, if possible to have them isolated and attached together, reach over 12,000 miles, of course it takes force to drive blood so far. And this brings me to remark that I think most people underestimate the amount of nerve force expended in simply running the animal body machine when it performs merely the functions of life. Especially is this the case in growing persons. This principle is recognized in the rearing of horses. Colts are not thought strong enough to work, but the human animal, when young, if not working is thought to be lazy. Often have physicians warned mothers about overworking young girls. So, again, human mothers are overworked during gestation, and by this over-use of nerve force the child has to come short,

and it is a serious question whether many of our patients have not been cheated out of health simply by the overworking of the mother. If brood mares are not worked for fear of injury to the foal, much less should the human mother be overworked. The moment we begin to recognize the limit there is to nerve force in the body, that moment will there be a more judicious expenditure of it. These things come home with increased application if there is constant underfeeding of the nerves.

Most practitioners are familiar with diseases caused by too much tax on the digestive nerve powers. I suppose that colic is one of the most common examples of this. Again, colic may be caused by diverting the nerve force, so that there is none left to digest the food. The writer furnished an instance of this while he was recovering from a fractured patella. He conceived the notion that it would be a good idea to write up the history of the fracture; so, while feeling very well, he had his library ransacked to find the oldest book on the subject, down to the latest. He began with Heister's Surgery, 1754. He copied out the main points in this; then he worked on more or less all day. He became much interested, so that he forgot all about his limb; but towards night he noticed that the injured limb was very impassive and cold. Soon after a violent colic seized him in the epigastrium; it was severe, and occupied all attention. Thinking it might be caused by the food being fermented, an emetic was administered; the food was ejected, but it was sweet and undigested. The pain continued. Finally, means were resorted to to restore warmth to the injured limb, and then the colic was relieved. It seemed that the food had not digested at all since dinner. The *rationale* of the thing seemed to be that my nerve forces were all used up in running the heart, brain, fractured knee-pan and study; so that there was none to digest the food. Hence the colic, as a warning of nature that I could not study, digest my food, and take care of the knee-pan fracture. It was

too much work. Whether I am right or wrong in my reasoning, I am certainly convinced that under similar circumstances I shall regard myself as doing a good day's work simply to lie still and let my nervous system run the machine. I believe I have reason to think that the digestion is under the control of the nerve force, for the most part, that comes from the ganglionic centres, and that it is possible to overwork them by improper feeding.

FOOD AS A CAUSE AND CURE OF INDIGESTION.

The microscopical and macroscopical examination of the fæces reveals the most striking evidence as to this department. Probably no man has done more in this direction than my associate. I have followed him somewhat long enough to sustain his position. Muscular fibres are found in the fæces, but not abundantly unless salted or fried. The teguments of the grains—the connective fibrous tissue—the parenchyma of roots, stems, fruits and vegetable food in general—occur in large quantity in healthy fæces. Dr. Salisbury is particularly opposed to the use of beans as food. They go through the alimentary canal *en masse*, generally undigested. This is due to their structure. The starch grains are done up in compact oval bundles, with a thick fibrous envelope that resists outside influences, especially the digestion. The starch grains look like eggs done up in a transparent bundle. One test of their cooking I have found to be polarized light. Before they are thoroughly cooked they polarize light, and are distinct in outlines. After cooking they do not polarize light, and are mingled together in one homogeneous mass. Owing to its great indigestibility, Dr. Salisbury says beans ought to be cut off from human foods, as man has not the digestive apparatus for them, and they don't digest well.

The subject of chronic diarrhœa has been made a special study by Dr. Salisbury. It is the old story of starch fermentation and its products, acting physically on the intestines, making the villi drunken with

carbonic acid gas. In this state the epithelial cells take in anything, like a drunken man, and transmit it to the blood. In fact, a vast deal of trouble is caused by the abnormal fermentation in this disease. The story is too long to be told here. He tells it well elsewhere.

Finally, my dear Dr. Sims, I would bring this long letter to a close, not because the subject is exhausted, but that your patience may be.

You asked for details. I could give them, but I think the most desirable way to convince is by facts not words. If it was possible to arrange that cases of the chronic diseases you are most interested in could be treated faithfully on the Salisbury plans, under your inspection, by Dr. S. and myself, and thus give you an opportunity to watch the actual progress of the cases for yourself, we should like it much better than to put you off simply with a monograph. I think our mutual friend, Dr. Sayre, could say that, notwithstanding all his freely pouring forth what he knows as to the treatment of humped back by the plaster cast, still cases continue to come under his notice where the plan has been a failure, not from any inherent trouble with the plan, but from the oversight of some apparently insignificant detail.

So has it been with us. We therefore think it best that we should see for ourselves that in all test cases the work should be thoroughly done. If, after a fair trial, we fail to establish the same results that we have already attained, we shall apologize for our error in judgment in carrying out what we have believed to be our duty, but we shall not apologize for having acted up to our convictions of duty.

Thanking you for the courtesy which you have accorded in inviting this letter, I am,

Very respectfully yours,

EPHRAIM CUTTER.

NOTE.—This letter is published in this JOURNAL with the consent of the writer, and at the request of Dr. Sims.—ED.

S. J. J. Woodward U.S.A.

Pres. Am. M. Am.

Washington

